Land Degradation and Human Development in Yemen

Sponsored by | UNDP Yemen
Led by | Taylor Hanna, Associate Director, Development Analysis
Supported by | Student Name, Student; Fellow Student, Pardee Fellow
Collaborators | Andrew Kruczkiewicz, Faculty, Columbia University; Michael Owen, Indufor

Project Summary

Pardee collaborated with researchers to assess land degradation and restoration potential in Yemen, aiming to inform policy solutions aligned with the Sustainable Development Goals (SDGs). The work included evaluating the extent and impact of land degradation, compiling climate data for scenario modeling, reviewing existing research, analyzing desertification through satellite imagery, and developing future scenarios. Findings were used to craft targeted policy recommendations that link land restoration with human security, food resilience, and SDG indicators, emphasizing synergies between climate action and socioeconomic development.

Research Question(s)

- What does land degradation and its impacts look like if current patterns persist?
- What if it accelerated?
- What if it was successfully slowed through integrated restoration efforts?

Key Findings

Accelerated land degradation could lead to:
- 5 million more Yemenis in extreme poverty
- 4 million more Yemenis suffering from undernutrition
- GDP declines by an additional 6%
- Cumulative GPD losses = 2 years of productivity

Integrated restoration efforts could:
- Raise GDP per capita to 2014 pre-conflict higher level by 2057
- Exceed 2014 HDI levels by 2040
- Bring 20 million Yemenis out of extreme poverty
- Bring 14 million Yemenis out of undernourishment

Core and Related Activities

- Report: Land Degradation and Human Development in Yemen
- Report Launch at United Nations Convention to Combat Desertification (UNCCD)'s 16th session of the Conference of Parties (COP16) in Riyadh, Saudi Arabia

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